The Field Museum

Natural News

Weekly Staff Newsletter
October 29, 1999

A media blitz over the world's oldest dinosaur fossils

This past Thursday, October 21, the Museum received national press coverage, with television, newspaper, and radio crews thronging the area outside the McDonald's Fossil Preparation Lab.

What was the focus of all this attention? Two small fragments of dinosaur jawbone, each less than three inches long, but with a big story to tell: at an estimated 230 million years old they appear to be the earliest dinosaurs ever found.

Illustration by Marlene Hill Donnelley

The two jaw fragments are from early dinosaurs called prosauropods. These kangaroo-sized herbivores probably walked on four feet, but may have been able to stand on their hind legs to feed on taller plants.

Speaking via live satellite video link from Denver, where he was announcing some of the team's finds at the annual meeting of the Society of Vertebrate Paleontologists, John Flynn explained to the media the importance of these and other recent finds from Madagascar exhibited here at the Museum. These included a *eucynodont* (a "mammal-like reptile,") and a *rhynchosaur* ("parrot-beaked reptile"). Not only will these finds help shed light on key moments in reptile and mammal evolution, they also help us understand how life was influenced by the splitting and shifting of continents during the Earth's history.

Like the discovery of the fossils themselves, this small exhibit was the product of a large amount of work on the part of many people. Special thanks go to **Bob Cazy, Ron Hall,** and **Mentee Teah** (Audio Visual); **Abe Bloom, Amanda Flood, Danielle Kiefer, Steve Lalik, David Mendez, Lauren Was,** and **Bob Weiglein** (Exhibits); **Lisa Bergwall, John Flynn, Jim Holstein, Bob Masek,** and **Carter O'Brien** (Geology); and **Carolyn Byrne, Laura Dini, Pat Kremer,** and **Nancy O'Shea** (Public Relations).

A very special thank-you goes to **Marlene Hill Donnelley** (Geology) and **John Weinstein** (Photography) for their contributions of scientific illustrations and photography to the exhibit.

Submitted by Matt Matcuk

FIELD NOTES

Week of November 1

Staff/Volunteer Events

Tae Bo class
- Monday, 5 p.m., Ground Floor East

Aerobics Class
- Tuesday, 5 p.m., Ground Floor East
- Thursday, 5 p.m., Ground Floor East

Green Sheet Meeting
- Wednesday, 3 p.m, Special Events

Noon Seminar
- Thursday, Zoology Classroom

United Way Campaign Kickoff
- Thursday, 3 p.m., Lecture Hall 1

Public Events

Eureka! The Archimedes Palimpsest
- Opens to the public Wednesday

Chicago Humanities Festival X
- Begins Sunday

The **Natural News** is edited by Rodger Patience in the Development department. Call ext. 7286 or e-mail *patience* with stories, news, events, or any item of interest to the Museum community.

NEW!!
Deadline for each week's issue is now **Wednesday** at noon.
NEW!!

ACADEMIC AFFAIRS

Where do curators spend their summers?

This summer, Janet Voight, associate curator of zoology, spent a lot of time traveling. Mid-June meant a road trip to the Evolution meetings in Madison, and getting back to The Field Museum just in time to meet visiting scholar Stephane Hourdez in the parking lot. Stephane, a Ph.D. student from France, spent the next four days helping to curate our collection of hydrothermal vent polychaetes, especially scale worms, a family with a name description of the large scales that cover their back. Stephane's identifications were essential to testing the endemism of various vent systems in the North Pacific, the site of several cruises of Janet Voight since 1996.

When Stephane left, Janet had two days to prepare before leaving for the American Malacological Society meeting in Pittsburgh. This national malacology meeting was set in Pittsburgh, described as temperate even in mid-summer, but in reality hot (in the 90s) throughout the meeting.

Returning to Chicago for 10 days, Janet packed to get ready to meet the *R/V Atlantis*, mother ship of the deep-diving submersible ALVIN, for a two-week cruise to the Gulf of Alaska. The target of this cruise was the Patton-Murray Seamount. While Chicago was sweltering in record heat, Janet was trying to sleep in a cabin directly under the ship's fog horn, which sounded 10 second blasts at two minute intervals for most of the cruise.

Janet managed to get on one ALVIN dive to 1226 meters, which ascended along the rise of the seamount to 550m. A highlight of this dive, which traversed through a "garden" of white sponges and orange corals, was the discovery of a whale fall—a whale skeleton at about 600m depth. Unfortunately, the whale hadn't died more than two or three years before, as cartilage appeared to be present between the vertebrae and the bones had not been colonized by the animals that are characteristic of late stages of bacterial degradation. Since no one in the ALVIN had the required federal permits to collect marine mammals, the videotape they shot is the only record of what they saw.

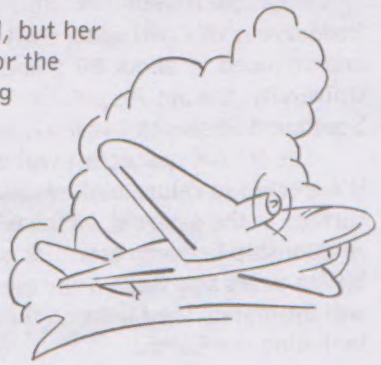
Arriving in Kodiak after the cruise, Janet stayed on for a few days, collecting mollusks in the intertidal zone with the help of a ship-mate from NOAA. Although the intertidal zone isn't the same as the bottom of the ocean floor, the Invertebrates collection benefited from the easy accessibility of diverse animals that Janet picked up without the aid of a 16-ton submersible. During one low tide on a point, a regular breathing was heard through the fog. When the fog slightly lifted, a humpback whale could be seen feeding in the bay. In time she departed and was replaced by a small group of Stellar sea lions. The fog continued until the rain fell so heavily the Kodiak airport was closed for 36 hours. The weather meant Janet got to spend an extra 12 hours at Anchorage where the temperature was a positively balmy 60 degrees.

Janet then spent 10 days in Chicago, finishing work on an NSF proposal submitted with the help of Deborah Bakken the day after Janet left for another two weeks at sea, this time aboard the *R/V Thomas G. Thompson* with the Remotely Operated Vehicle (ROV) JASON. The plan for this cruise was to recover experiments that had been placed on the seafloor the year before at hydrothermal vents on Axial Volcano, Juan de Fuca Ridge, and on Baby Bare basalt outcrop and a drill hole in the sea floor. However, problems with the electrical connections on JASON meant that less time was available to make short-term experiments, biological collections, and observations on the seafloor. The last site was a key area where Janet wanted to make collections and high quality videotape of the octopuses that had been seen to brood eggs on rock exposures in the area.

Unfortunately, the cryptic notation "DVLG GALE" that had been on the faxes from the weather bureau for several days became less cryptic at this site. In fact as the "developing gale" (wind speed over 35 knots) arose in the immediate vicinity, JASON had to be recovered to avoid the risks of losing it in the rapidly increasing waves and to reduce the chances of injury to crew members. $25,000 worth of electronic dataloggers related to a geophysics experiment were left on the seafloor, and the biological life on that enigmatic rock outcrops remained unsampled, and nearly undisturbed. The last day at sea on the cruise was spent waiting for the wind to slow and the waves to calm. It didn't happen.

Janet , like four other members of the science party, got sick with the flu after she got home. For the first couple days, this seemed just like recovering from having been at sea. ROV operations are 24 hours a day and the science party works as does ship's crew, four hours on and eight off. A scientist at sea must make sure she is able to use a potential chance to make a collection, or to handle specimens in those "off" hours. Janet on two occasions wound up staying up for 24 hours straight.

Distinguishing between latent exhaustion and the flu is a tough call, but her symptoms were generally going away in time for her to give a lecture for the Conservation Training Consortium (who were wonderfully understanding about her somewhat spontaneous presentation).



The next week, Janet flew back to the west coast to participate in RIDGE 2000, the NSF planning conference devoted to outlining the science agenda for the next decade of scientific research at mid-ocean ridge hydrothermal vents. As one of about 130 scientists, Janet helped to devise a plan to stimulate interdisciplinary research at these spreading centers on the sea floor.

Currently back in Chicago, hopefully for at least a weekend or two, Janet has only one request: Please don't ask her when her next trip is!

Reese returns from Israel, Turkey research trips

David Reese (Anthropology) has recently returned to The Field Museum after 8-1/2 months of zooarchaeological research abroad.

He first spent six months as the NEH Fellow at the W. F. Albright Institute of Archaeological Research in Jerusalem. The Albright is the oldest American center for Near Eastern studies in the Middle East, founded in 1900, and boasts living accommodations, laboratories, and a library. In addition to conducting research and seeing the country, David lectured at the Albright and at the Institute of Archaeology at Hebrew University. During this period he also spent a week on Cyprus, lecturing to students and studying fauna from American excavations at Atheniou-Malloura, a 7th century BC sanctuary site.

After leaving Israel, David went to western Turkey, where he began work on the fauna from three Ankara University excavations in the Izmir region, mainly of Late Chalcolithic and Early Bronze Age periods. He concluded his Turkish research with analysis of the faunal remains from a 14th century BC shipwreck now stored in the Bodrum Museum. David's Turkish research was funded by grants from the Institute for Aegean Prehistory and the American Research Institute in Turkey.

Haas returns from Oklahoma

As part of two grants from the National Park Service to inventory the Native American collections, Jonathan Haas (Anthropology) has just returned from a trip to Oklahoma to visit the Pawnee and Cheyenne tribes. He delivered comprehensive inventories of the respective collections from both tribes along with albums of photographs of the objects in these collections. He also had a chance to see a recent painting by Carmen McKinney who used an image from a Pawnee shield in the Museum's collection as inspiration for creating a contemporary work of art. Final stages of both inventory projects are underway, including editing of videos of tribal elders working with the collections.

RECIPES NEEDED: THIS MEANS YOU!

We're looking for all new recipes for the 1999 FMNH Staff and Volunteer Cookbook, to be titled "Oven-Browned Adventure." Please send them in any form at all to Mary Anne Rogers in the Division of Fishes (ext. 7732, mrogers@fmnh.org) or to Elaine Zeiger in the Geology department (ext. 7627, ezeiger@fmnh.org)

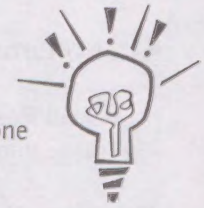
ACADEMIC AFFAIRS

Asteroid scientists touch down at Field Museum

The Field Museum recently hosted a meeting of the science team for NASA's Near Earth Asteroid Rendezvous (NEAR) spacecraft mission. The meeting was organized by **Meenakshi Wadhwa** (Geology) and attended by about 20 scientists from several institutions, including Brown University, Cornell University, the Jet Propulsion Laboratory, Johns Hopkins University, Northwestern University, the Southwest Research Institute, and the University of Hawaii.

The NEAR spacecraft will be the first ever to orbit an asteroid (433 Eros) in February of 2000. It is expected to return high resolution multispectral images and bulk geochemical measurements of the surface of the asteroid, which will lead to a better understanding of the origin of asteroids and the relationship between asteroids and meteorites. Since asteroids are thought to have formed about 4.5 billion years ago (soon after the birth of our solar system), the information from the NEAR spacecraft will ultimately shed light on the early history of the solar system and the formation of planetary bodies including the Earth.

"More light!"



Lori Grove in Geology is seeking a portable, magnifying lamp. An older, heavier model is preferable. Please contact her at ext. 7098 or lgrove@fmnh.org if you know of one that could be made available to her. Thank you.

Veteran special effects wizard visits the Field

On October 8, the museum received a visit from movie special effects pioneer Ray Harryhausen, who was in town for a film festival, and who, being an avid dinosaur fan, naturally wanted to see The Field Museum.

John Flynn (Geology) had been contacted by one of Mr. Harryhausen's friends, who thought he would love to have a look behind the scenes of both the Geology and the Exhibits departments. **Becky Margolin** (Exhibits) enthusiastically agreed to coordinate Mr. Harryhausen's whirlwind tour, arranging for him to meet with **Shelley Ulrich** and other developers, and for **Bill Simpson** and **Chris Brochu** to show him around the Geology Department and the Charles Knight murals in *Life over Time*.

Dinosaurs have been an inspiration of Mr. Harryhausen's and a specialty of his work throughout the years. His natural historyesque stop-motion animation has appeared in such films as *The Beast from 20,000 Fathoms*, *Jason and the Argonauts*, *The Valley of Gwangi*, *One Million Years B.C.*, and *The Clash of the Titans*. One of his first jobs in Hollywood was as a special effects technician on the original (1949) *Mighty Joe Young*, working under the supervision of Willis J. O'Brien of *King Kong* fame.

Submitted by **Mark Alvey**

Have Stipple Pen, Will Illustrate

Freelance scientific illustrator for hire.
References and samples available on request.

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Memo

To: Field Museum Staff

From: Diane White-Public Services

Date: October 28, 1999

Re: Soldier Field Monthly Parking Passes

This memo will address some issues concerning monthly parking passes. Please contact the Public Services office at extension 7911 with any questions.

1. The November passes are bar-coded. The bar-coding process has caused delays in the Museum's receiving passes. We apologize for any inconveniences.

2. The bar-coded pass will allow express lane entry into the Soldier Field East Lot. The express lane is located on the right side of the parking East lot entrance. This lane allows employees to enter at any time depending on the employee shift whether it be morning, afternoon and night shift. The laminated pass allows employees to swipe the card through the bar-code reader. The pass should be inserted face up. As always, the pass needs to be displayed on the rear view mirror of the automobile. The passes will also allow Soldier Field Joint Venture to track entry into the lots. **There is a bar code reader only at the East Soldier Field lot. The current procedures will remain in effect at the North lot and the Planetarium lot.**

3. Beginning in January 2000, when an employee loses a pass, Soldier Field can invalidate the bar code for the pass and thus issue a new pass at no charge depending on frequency of occurrence.

4. Beginning in January 2000, the same number of passes will be issued each month so that an employee can receive the same number each month.

5. The Planetarium lot is undergoing some changes and will be able to accept bar-coded passes in early 2000.

A get-together to thank anthropology volunteers

The anthropology department held a volunteer get-together last Wednesday, October 20. About 15-20 anthropology volunteers were in attendance along with members of the professional and office staffs and many of the curators. Everyone enjoyed munchies and mingled during the lunchtime event. The get-together was held as a small gesture to thank our dedicated cadre of volunteers for their tireless work for (and helpful support of) the anthropology department.

Submitted by **Sheila Wheatley**

Peru trip gathers new bird and mammal species

Bruce Patterson, Doug Stotz, Tom Gnoske and **Matt Dean** returned from Peru at the close of the first season of the museum's Peruvian Zoological Expedition, undertaken jointly with San Marcos University in Lima. The trip was remarkably successful, sampling mammals, birds, and their parasites in three distinctive life-zones within the Manu Biosphere Reserve with the support of the National Science Foundation and several museum funds.

During nine weeks in the field, the crew collected information on 110 species of mammals and 575 species of birds (approximately the number of species known for both groups from the eastern third of North America) and collected museum specimens and frozen tissues for 95 species of mammals and 300 species of birds. In addition, bulk samples of ectoparasites were taken from 1,700 individual vertebrates, and when sorting is completed, the collection will provide more than 4,000 samples for collaborating ectoparasitologists.

The bird team added 20 additional species to the 901 previously known from the park, and documented new elevational records for nearly 200 species.

The mammal team added 8-10 more species to the park's fauna, at least five of which are new. Two of the novelties represent highly distinctive new genera of rodents that should be extremely valuable in understanding the radiations of murids and caviomorphs in South America. The richness of Manu's vertebrate faunas (the longest yet recorded for any protected area in the world) promises valuable insights will be gained by collaborating scientists studying ectoparasites obtained during this expedition.

The collections are now in Lima, awaiting export permits. The second field season will take place from August to October 2000, which should be ample time for the participants to regain the 15-25 pounds they each lost during the first field season.

Submitted by **Bruce Patterson**

Jochen Gerber joins Invertebrates

The Department of Zoology is delighted to welcome Dr. Jochen Gerber as new collections manager in the Division of Invertebrates. He will fill the position vacated by John Slapcinsky, who moved to Florida some time ago. Jochen, a land snail specialist with much collection experience, comes to us from Munich, Germany. He can be reached at ext. 7577.

Submitted by **Rüdiger Bieler**

Congratulations, Dr. Hamill!

Frank Hamill, UIC graduate student of Dr. Doel Soejarto of the UIC and The Field Museum's Botany Department, passed his preliminary Ph.D. examination on October 14. The proposal submitted to the committee for the exam was entitled, "Collaborative Investigation of Medicinal Plants of the Buganda Kingdom of Southern Uganda, East Africa." Committee members included Dr. Soejarto, Dr. Norman Farnsworth (UIC), Dr. Gail Mahady (UIC), Dr. Anna Roosevelt (UIC and FMNH), and Dr. William Burger (FMNH). Congratulations, Dr. Hamill!

And to you, too, Dr. Cipriani!

Roberto Cipriani, Ph.D. student in the Committee on Evolutionary Biology (CEB) program at the University of Chicago and a resident student in Zoology's Division of Invertebrates, recently defended his dissertation entitled "Construction, function, and evolution of accretionary morphologies with examples of larval and post-larval coiling in heterobranch gastropods." The study involved the peculiar change between larval and post-larval shells of heterobranch snails, a group also of particular interest to Rüdiger Bieler (Zoology) who served as Roberto's major advisor.

Roberto's study combined aspects of fluid mechanics (what are the advantages for particular larval sizes and shapes?), morphological computer modeling (how does a particular larval morphology constrain subsequent growth of the postlarval shell?) and practical aspects of malacological work (how can such features be quantified as systematic characters?).

Roberto and Rüdiger met in Venezuela in 1986, where Roberto worked as a lecturer at the Universidad Simon Bolivar (Caracas). They stayed in touch, and five years ago Roberto joined CEB's doctoral program. Within the next few weeks, Roberto will return to Caracas to take his new position as Assistant Professor at Simon Bolivar. Congratulations, Dr. Cipriani!

NEWS YOU CAN USE

Last chance to catch a *Future Perfect* broadcast live

The Project Millennium team would like to invite Field Museum staff and volunteers to attend the final broadcast of *Future Perfect: Conversations for the New Millennium.* The live broadcast is scheduled for Wednesday, November 3 at 7p.m.

The featured speakers are historian David Halberstam and actress/social critic Anna Deavere Smith. The two will explore the legacy we leave for future generations. The show features a video segment on the "Transitions" theme produced by Street-Level Youth Media and includes an audience discussion moderated by Bill Kurtis.

If you are interested in attending the live broadcast at the WTTW studios, please call ext. 7418 or e-mail ptuomey@fmnh.org, by November 2.

Submitted by Patti Tuomey

FIELD OF SCREAMS FILM SERIES!!!

Join us for brews, views, tricks and treats!

All staff and volunteers are invited to join us this weekend as our Halloween Film Series continues...

Saturday, October 30, 7 p.m.
Them—and an *Underground Adventure* Mystery Tour

Sunday, October 31, 7 p.m.
The Relic—and a secrets-of-The-Field-Museum tour exploring scenes from the film

Kim and Carlo's hot dog stand will be offering snacks before each show, and each ticket purchase includes three complimentary beverages (donated by Goose Island). Staff and volunteers are entitled to one free ticket, and additional tickets at 1/2 price (only $7.50 for all of the above? Wow!). Please call or see Mark DeNardo or Sandra Blake for tickets today—ext. 7400.

Noontime seminars resume, now on Thursdays

We resume our noontime seminar series (now on Thursdays) with a talk by a distinguished scientist from the Hebrew University of Jerusalem. Dr. Eitan Tchernov, Robert O. Bass Visiting Scientist, will speak to us on "The C-value paradox and Living Fossils." Why is it that the amount of DNA can vary by a factor of as much as 80,000 without any connection to phenotypic complexity? Why is it that "living fossils" are those that contain so much "redundant" DNA? To find out, please join us for this lunchtime seminar on November 4 at 12 noon in the Zoology Classroom on the third floor.

Submitted by **Bill Burger**

Eureka! The Archimedes Palimpsest

November 3, 1999 to January 3, 2000
Special Exhibitions Gallery E, Ground Floor

Nearly destroyed many times, and more than a thousand years old, *The Archimedes Palimpsest* is one of the most valuable books in the world. Sold at Christie's auction house for $2 million, this priceless manuscript now belongs to an anonymous collector. Beginning Wednesday, November 3 and continuing through Monday, January 3, 2000, the Museum will display this unique manuscript in the exhibition *Eureka! The Archimedes Palimpsest.* The book contains a compendium of mathematical treatises by Archimedes of Syracuse, the famous Greek mathematician born in 287 B.C. This will be the last showing to the public before the volume enters a five-year conservation program.

The Archimedes Palimpsest contains the only copy of the *Method of Mechanical Theorems* to survive into the 20th century. When Danish philologist Johan Ludvig Heiberg discovered that the palimpsest contained this missing treatise, hidden under a religious text, it made front-page news in the *New York Times* on July 16, 1907. Containing the roots of modern calculus, the *Method of Mechanical Theorems* reveals a genius that parallels that of Einstein and Galileo. More than 90 years after its discovery, scholars and mathematicians still cannot explain how Archimedes arrived at the *Method.*

Through unimaginable coincidences, this text still exists. Only about one percent of all the writings of the ancient world have survived to the present day, and *The Archimedes Palimpsest* contains one of those texts. Now, an interactive ultraviolet light display and computer-aided digital enhancement allow the hidden text to be revealed to the naked eye. This tenuous thread that reaches 2,000 years back into antiquity can now be seen by the general public in what will be its last showing before it is turned over to conservators for a five-year conservation program. This exhibition was organized by The Walters Art Gallery, Baltimore.

Submitted by **Robin Groesbeck**

Web team launches new site

The Field Museum has a new web site. Same address (www.fieldmuseum.org)—brand new look. The site has been rebuilt to brand it with the Museum's identity and to improve navigability for users. This major project has been the team effort of **Lori Breslauer** (Web manager), **Allyson Meyer** (Web developer), and **Brad Loetel** (former Webmaster), plus numerous staff from nearly every department.

There are many new features to explore. *Planning Your Visit* has its own section, making it much easier for visitors to prepare for a trip to the Museum. The *Calendar of Events* pulls all public programs into one searchable location. *Exhibits* offers expanded information and more images. *Education* presents its distance learning program online, starting with "Life Underground" and "Dig It!" *Membership* has its own section, and the *Museum Store* has greatly expanded its presence and includes impressive offerings tied to Museum exhibits.

Thanks to everyone who provided us with content, good suggestions, and critical review throughout this effort. Special thanks to everyone in Computing, especially **Jim Koeppl**, **Andy Chan** (who kept our computers running), and **Neil Young** and **Rayfield Drake**, who helped get the new site running smoothly.

Submitted by **Lori Breslauer**

From the desk of John McCarter

Dear Colleagues:

The words "United Way Crusade of Mercy" conjure up different images for many people. The United Way is an institution created to benefit all people who need assistance by funding community organizations, health care, and educational groups. Many United Way agencies serve those whom The Field Museum serves, especially children.

The many agencies that the United Way supports depend on contributions from individuals and organizations like ours. I would like to invite all of you to attend the United Way Campaign Kickoff on **Thursday, November 4** to learn more about their programs and donor agencies.

Please come to **Lecture Hall 1** on Thursday at 3 p.m. for snacks and a brief gathering. At the kickoff, we will hear a presentation from Sr. Catherine Mary Norris (Sr. Katie) who is the Director of the St. Vincent DePaul Center in Chicago. We will also have a raffle for those who attend.

The United Way Campaign builds teamwork between all departments and positively promotes The Field Museum. I encourage all of you to consider making a pledge or contribution to The United Way -- by doing so we help "write a happy ending."

Sincerely,

John McCarter
President

You can write a happy ending.